

TABLE OF CONTENTS

Letters to NAUG	2	NAUG News	24
<ul style="list-style-type: none">• How to create comma-delimited files.• How to use an Epson LQ printer.• An important source of information.		<ul style="list-style-type: none">• A more attractive AppleWorks Forum.	
Software Review	4	Special Offers	25
<ul style="list-style-type: none">• The Manager and Switch-It!: Major enhancements for your IIGs.• The limits to program switching.		<ul style="list-style-type: none">• News and special offers from NAUG, Office Productivity Software, Apple Expo West, SoftSpoken, Computer Literacy Press, Connectix, Varcon, MacStronomy, Sequential Systems, and JEM Software.	
My Favorite Template	9	Public Domain Update	28
<ul style="list-style-type: none">• A sophisticated business invoice template.		<ul style="list-style-type: none">• Five new disks in the Public Domain Library.• New Macintosh system software.	
Special Offers	16	Members Helping Members	30
<ul style="list-style-type: none">• Special discounts on Express 2.0.		<ul style="list-style-type: none">• How to get help with CPUs and memory.	
My Favorite Macro	17	NAUG Classifieds	31
<ul style="list-style-type: none">• How to remove files quickly.• A macro that corrects for hand shifting.• How to add a macro.		NAUG Membership	32
UltraMacros Primer	20	Electronic Index Disk Update	32
<ul style="list-style-type: none">• How to use Debug.• The history of Debug.			

Support for AppleWorks and ///EZ Pieces Users

How to Create Comma-Delimited Files

Dear NAUG,

How can I convert my AppleWorks data base file into a comma-delimited ASCII file acceptable to my MS-DOS mail management program?

Rob Kuhr
East Lansing, Michigan

*[Ed: Converting your data is a two-step process. First, you must save your AppleWorks data in a comma-delimited format. Then you must transfer the file onto an MS-DOS disk. Fortunately, these operations are not difficult. You will need AppleWorks 3.0 and TimeOut SuperFind on the TextTools disk. If you are uncomfortable with ProDOS pathnames, you should also read the article entitled "What You Should Know about ProDOS Pathnames" in the November 1986 issue of the **AppleWorks Forum** and in the **AppleWorks Handbook: Volume One**.*

Then follow these steps:

- 1. Create an AppleWorks tables format report that contains the categories you want to transfer to the MS-DOS computer. Do not change the default column widths; all your data will transfer even with the narrow columns on the screen. However, arrange the columns so they match the sequence of fields expected by the mail manager.*
- 2. Issue an Apple-P command and "print" the report to a text (ASCII) file on your disk. Indicate that you want "Tabs between categories, Returns between records".*
- 3. Return to the AppleWorks Main Menu and select choice #1, "Add files to the desktop".*
- 4. With the Add Files Menu on the screen, select choice #3 to indicate that you want to create a*

The **National AppleWorks Users Group (NAUG)** is an association that supports AppleWorks users. NAUG provides technical support and information about AppleWorks and enhancements to that program. Our primary means of communicating with members is through the monthly newsletter entitled the **AppleWorks Forum**.

new word processor file. Then select choice #2, "From a text (ASCII) file" from the Word Processor Menu. Select the file that you saved in step #2 above.

Now you will use TimeOut SuperFind to replace the tab characters with commas. Continue as follows:

- 5. With the document on the screen, press Apple-Escape to access the TimeOut Menu and select SuperFind.*
- 6. Press Apple-R, the Tab Key, and the Return Key to indicate that you want to replace all Tab characters. Then type a comma and press the Return Key. Select "All" from the Replace Menu.*
- 7. Issue an Apple-P command and "print" the document as an ASCII text file on your disk. Respond to the "Should the text (ASCII) file have:" prompt by pressing the return key to select choice #1, "Standard text format with tabs".*

You now have a comma-delimited file on your ProDOS disk. The next step is to transfer the file to an MS-DOS disk. You have at least five alternatives:

- 1. Use Cross-Works to transfer the file. (Cross-Works is a complete file transfer system that comes with both Apple II and MS-DOS versions of the Cross-Works program and the necessary cable. You run Cross-Works on both computers and transfer the file to your MS-DOS system. A*

AppleWorks Forum

Editor: Cathleen Merritt

Associate Editor: Warren Williams

Page Layout: Nanette Luoma

Publisher: The National AppleWorks Users Group

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The "AppleWorks Forum" (ISSN 0893-4118) is published monthly for \$31 per year by the National AppleWorks Users Group, 49068 Harvest Dr., Plymouth, MI 48170.

Second Class postage paid at Plymouth, MI, and additional mailing offices.
POSTMASTER: Send address changes to AppleWorks Forum, NAUG, Box 87453, Canton, MI 48187

*complete review of Cross-Works appears in the May 1989 issue of the **AppleWorks Forum**.)*

2. *Connect the two computers with a cable and use communications programs on both computers to do the transfer. Step-by-step directions appear in the article entitled "How to Transfer Files into AppleWorks — Part I" in the September 1988 issue of the **AppleWorks Forum**.*
3. *Use a communications program to upload the file to a bulletin board or other electronic service from the Apple II. Then use a communications program on your MS-DOS computer to download the file. Step-by-step directions for these transfers appear in the article entitled "How to Use the NAUG BBS to Transfer a File" in the October 1990 issue of the **AppleWorks Forum**.*
4. *Use an Applied Engineering PC Transporter to do the transfer. The PC Transporter can read Apple II files and write MS-DOS files. Thus, you can use the PC Transporter system to do the conversion.*
5. *Use Apple File Exchange on a Macintosh computer to transfer the file onto a Macintosh disk and then onto an MS-DOS disk. For complete directions, see the article entitled "How to Transfer AppleWorks Files to Macintosh Computers" in the November 1988 issue of the **AppleWorks Forum**.*

It is hard to determine how long it will take the first time you do the transfer. But once you get some experience, it should take less than 15 minutes to prepare your AppleWorks files for the mail management program.

*See page 26 of this issue of the **AppleWorks Forum** for a special NAUG discount on Cross-Works.*

TimeOut TextTools, which lists for \$49.95, costs \$29.95 plus \$3.50 s/h from NAUG.]

How to Use an Epson LQ Printer

Dear Cathleen,

The list of printers built into AppleWorks does not include any printers released after mid-1989. But knowledgeable users can get AppleWorks to support most of those devices.

For example, owners of Epson LQ series printers should tell AppleWorks that they have an Epson FX printer. Change the printer interface card code to Control-I ØN. You may have to reset the "needs a line feed" command depending on how you set the DIP switches in the printer.

I got this information by calling Claris Technical Support at (408) 727-9054 during normal business hours. Be prepared for a long wait in the telephone queue, but the wait is worth it once you get through.

William Scratchley, Jr.
Brick, New Jersey

Important Source of Information

Dear Cathleen,

Thanks for publishing the article that describes how to fix your own disk drives (in the February 1993 issue of the **AppleWorks Forum**).

It's easier to adjust the speed of some drives than others. For example, the excellent drives made by the now defunct Rana Systems have strobe patterns on the flywheel that you can use to adjust the drive with the help of a standard fluorescent lightbulb.

Specific directions appear in the SAMS Computer-Facts booklet #CD3. In fact, the SAMS booklets have schematics and adjustment diagrams for many different Apple II components.

James Fahs
Fairfax, Virginia

[Ed: NAUG members who want to do their own computer repair and maintenance should get SAMS' new PhotoFact Annual Index, which costs \$4.95 plus \$1 s/h from Howard W. Sams, 2647 Waterfront Pkway, Indianapolis, IN 48214; (800) 428-SAMS; Fax: (317) 298-5408, (800) 552-3910.]

The Manager and Switch-It!: Major Enhancements for Your IIGs

by Ira M. Garvin

We celebrate some revolutions with fireworks and parties. Others come upon us quietly and can catch us unaware.

During the past month we've seen the quiet release of two new products that can have a revolutionary impact on how you use your Apple IIGs computer. Unless you followed the news items carefully, the significance of these products can be lost among the many pages of important information presented in this journal.

But make no mistake about it; these products will change the way you work and will significantly improve your personal and business productivity with your Apple IIGs system.

What Are They?

Seven Hills' The Manager and Sequential System's Switch-It! are two Apple IIGs System 6 enhancements that let you instantly "switch" between 16-bit applications. These programs save the time you would normally spend launching a new application when you stop working with one program and switch to a different application. The Manager and Switch-It! also let you use a clipboard to instantaneously transfer data between programs, thus adding a new level of integration to the 16-bit Apple IIGs environment. This gives Apple IIGs users one of the highly touted features previously available only on the Macintosh.

For an example of the power of these programs, see *Figure 1*, which shows both AppleWorks GS and HyperStudio running under The Manager. Clicking on either win-

Figure 1: Two Applications Running Under The Manager

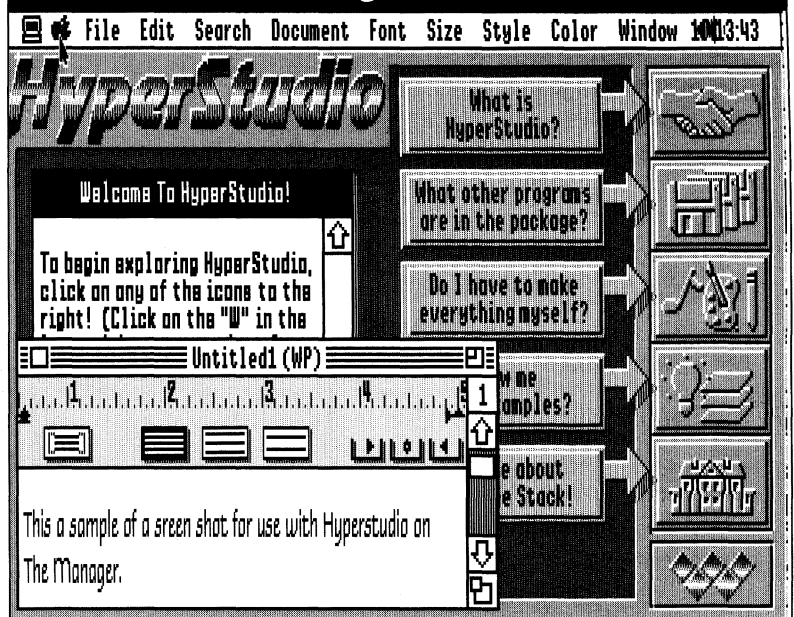
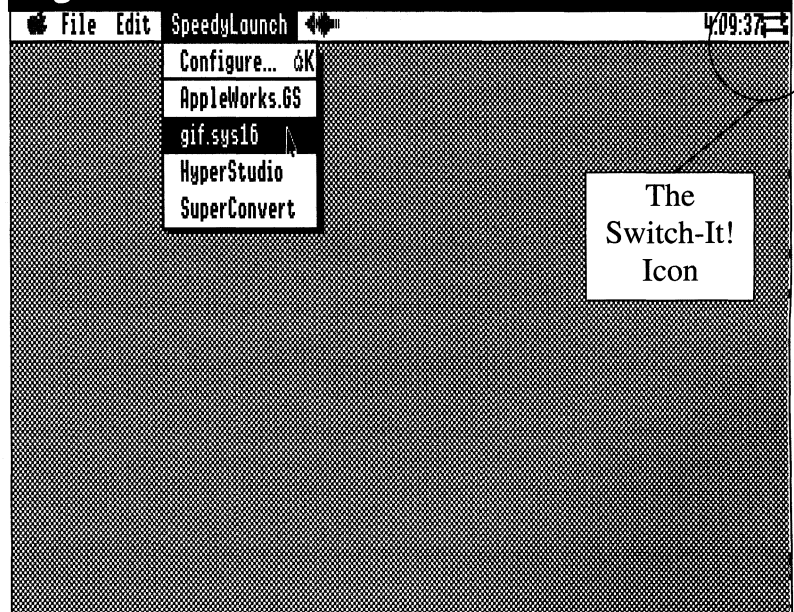


Figure 2: The Switch-It! Icon



The Limits to Program Switching

Apple IIGS owners face two memory-based limitations when running multiple programs. First, both The Manager and Switch-It! keep your applications and data files in memory. You will want at least four megabytes of RAM in your computer to take full advantage of these programs.

Second, these applications must share Bank Zero of the memory in your Apple IIGS. Bank Zero contains 64K of RAM that the system uses to monitor the programs running on your computer. Every program uses some of that memory. (For example, HyperCard GS, the most Bank Zero memory-hungry application, requires about 20K of Bank Zero memory.)

The Manager and Switch-It! take different approaches to managing Bank Zero memory. Switch-It! swaps data in and out of Bank Zero as you switch programs. That makes all of Bank Zero available for every application.

The Manager gets programs to share the non-Bank Zero memory in your computer, which limits the number of applications you can run under The Manager. For example, you cannot run AppleWorks GS and HyperCard GS concurrently since both applications require large amounts of Bank Zero memory. However, most applications do not require as much memory and run comfortably under The Manager. Sharing Bank Zero memory is a trade-off that lets The Manager offer its potential for multi-tasking.

down switches you between those programs. The new icon at the left edge of the Menu Bar tells you the active application.

Switch-It! adds the Switch-It! double arrow to the Menu Bar (see *Figure 2*). Clicking on the Switch-It! icon displays a pull-down menu that you use to switch between applications.

System Requirements and Installation

The Manager and Switch-It! work on any ROM 01 or ROM 03 Apple IIGS equipped with at least two megabytes of RAM and running under System 6. However, you will want at least four megabytes of RAM and a hard disk to take full advantage of these programs.

Installing the programs is easy. You turn on the computer, insert a copy of the program disk, read any last minute update files on the disk, and run the Installer. Then shut down and restart your system and go through the configuration process that tells the program the applications you want to run on your computer.

Compatibility

According to the developers, The Manager and Switch-It! are compatible with all applications that follow the Apple programming guidelines. An appendix in the Switch-It! manual lists the tested applications; The Manager disk includes a file that lists the applications, inits, and other programs that you cannot run under The Manager.

I was able to use all my favorite applications (including AppleWorks GS, HyperCard IIGS, HyperStudio, Platinum Paint, and LightningScan) with both programs. I could not run two screen blankers with either program; the developers of these screen savers are aware of their non-compatibility with both The Manager and Switch-It!. [Ed: For a copy of the Switch-It! compatibility list, send a self-addressed, stamped, business-size envelope to "Switch-It! List", NAUG, Box 87453, Canton, Michigan 48187.]

Extras

Switch-It! includes three New Desk Accessories (NDAs) that enhance the functionality of your system. The Clip-It! NDA lets you copy part of any screen between applications. The Memory Bar NDA keeps track of your available memory. And ScrapMaster offers an enhanced scrapbook that can store your graphics and text.

The Manager includes a built-in memory map (see *Figure 3*) and QuickLaunch, which lets you launch applications by selecting the program from the Extras Menu on the Finder Menu.

Similarities and Differences

As you might expect, there are more similarities than differences between these programs. Neither is copy-protected, and both programs let you launch directly into the Finder or into the switching application.

Software Review...

Both programs include a mini-launcher that leaves you more free memory than the Finder. And each program lets you switch applications through easy-to-use pull-down menus.

However, there are some significant differences between these competitors.

Switch-It! only works with 16-bit applications while The Manager lets you launch (but not switch between) ProDOS applications. (However, you must quit all your 16-bit applications before launching the 8-bit program with The Manager.)

You have to tell Switch-It! the largest amount of Bank Zero memory required by any of the applications you will run on your system; a table in the manual provides the necessary information. Switch-It!'s stack sharing feature lets you run AWGS 1.1, HyperStudio, HyperCard GS, and Platinum Paint without running out of Bank Zero memory, so I see no problem with this stack-sharing approach to memory management. (See the sidebar entitled "The Limits to Program Switching" for more information about stack-sharing and Bank Zero memory.)

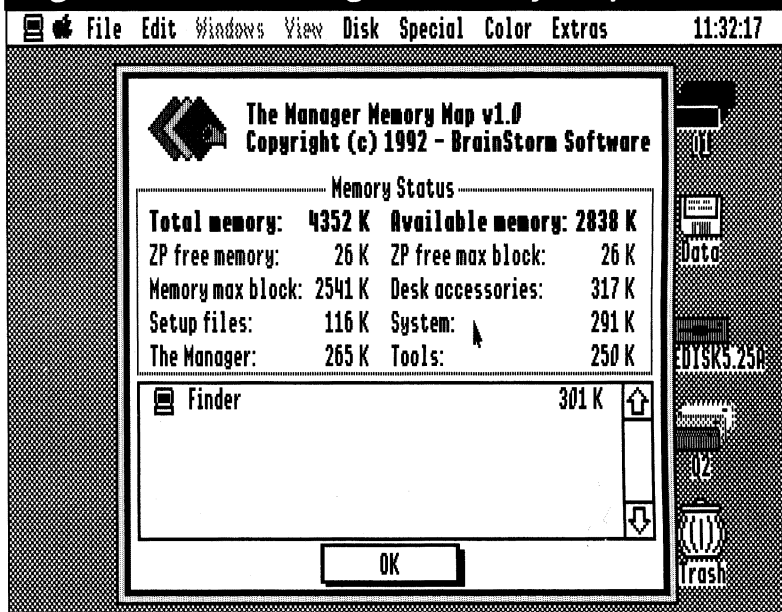
Applications share your Bank Zero memory under The Manager; the program handles this portion of memory as you change applications.

Switch-It! displays one active application on your screen at a time. You select the application from the Switch-It! Menu.

The Manager offers full Multi-Finder capabilities, including single-click switching between applications on the desktop and the potential for multi-tasking of applications. *[Ed: Multi-tasking is the capability to run a program in the background while a different program appears on your screen. For example, multi-tasking lets you read your electronic mail while Shrink-It works in the background to unshrink some files. However, multi-tasking is an unrealized potential, since it requires a multi-tasking savvy application, none of which are presently available for the Apple IIGs.]*

The Manager lets you access all NDAs that work on the same screen mode (640 mode or 320 mode) as the application running when you launch the NDA.

Figure 3: The Manager Memory Map



However, the NDA you open "belongs" to that application. For example, if you launch MinesGS while running HyperStudio, the NDA remains open with HyperStudio. Switching to AppleWorks GS and clicking on the MinesGS window de-activates AppleWorks GS and activates HyperStudio and MinesGS. You must then close MinesGS, return to AppleWorks GS, and launch MinesGS to use the NDA with the new application. If you use The Manager, make certain that you close any NDA you want to use with other applications on the desktop.

Switch-It! does not let you switch or launch applications with an NDA open. The program automatically closes your NDAs when you switch applications.

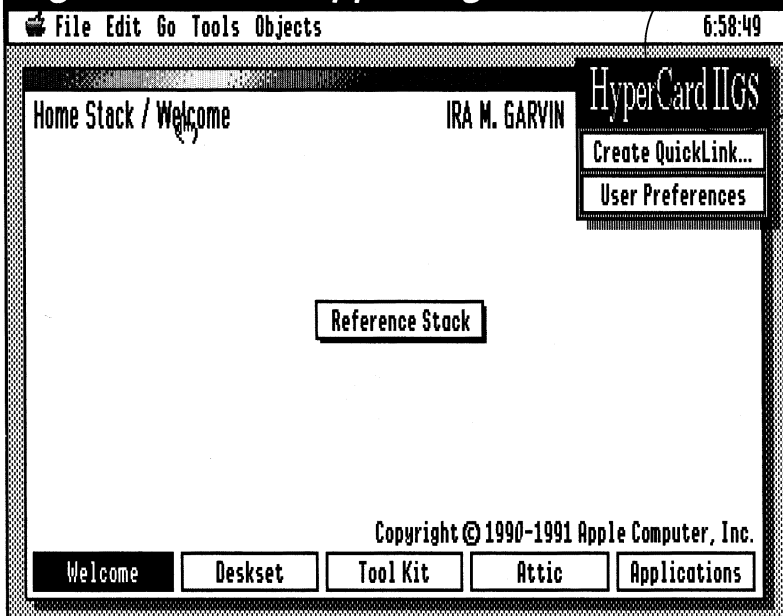
Limitations and Bugs

Both products are robust; neither locked up my computer nor crashed me to the monitor while switching or running applications.

However, I found minor annoyances with both programs. For example, the Switch-It! icon disappears when you run some programs (see Figure 4 which shows the missing Switch-It! icon when HyperCard GS is active). Clicking in the icon area restores the icon. The Switch-It! manual warns you about this problem.

Using The Manager, you must hold down the Open-Apple, Control, and Tab Keys simultaneous-

Figure 4: The Disappearing Switch-It! Icon



[Ira M. Garvin is a Social Studies Teacher at West Hempstead High School on Long Island and can be reached on America Online as Sherlock4.]

[The Manager lists for \$69.95. Until July 1, 1993, NAUG members can buy The Manager for \$44.95 plus \$3.50 s/h directly from NAUG. Switch-It! lists for \$79.95, but costs \$46.95 plus \$3.50 s/h directly from NAUG.

NAUG accepts Visa and MasterCard. International orders by credit card only;

international shipping extra. Both The Manager and Switch-It! are covered by NAUG's unconditional policy of "satisfaction guaranteed or your money back".]

ly for several seconds when you access ProSel-16, synthLAB, and some other shell-based applications. That, too, is in the manual. (Seven Hills says the wait occurs because The Manager only switches at a "GetNextEvent" or "TaskMaster" call, which is the safest point to suspend a program.)

But these are minor complaints, given the dramatic increase in the efficiency you gain by using these programs.

Conclusions

The Manager and Switch-It! are excellent programs, but they are not for everyone. Users who work exclusively with 8-bit applications like AppleWorks, or who use a single 16-bit application like AppleWorks GS, will not benefit from these programs.

However, The Manager and Switch-It! significantly improve the productivity for those of us who use multiple 16-bit programs on our Apple IIGS systems.

These are both fine products. However, I like the way The Manager manages the desktop windows and lets me switch between applications by clicking on a window. The Manager also offers the promise of support for future multi-tasking operation.

Although users will be happy with both products, I intend to keep The Manager on my system. ■

ULTRACAT

A Comprehensive Disk Catalog Program for the Apple IIGS using System 5.04 or later.

Reviewed by John Link in the August 1992 AppleWorks Forum, he says that UltraCat is a "must have" for hard disk owners and AppleShare users. A2-Central likes the ability to catalog Macintosh HFS and DOS 3.3 disks. InCider/A+ nicknamed it CoolCat and praises the English file types. GS+ Magazine found UltraCat to be intuitive and explorable without having to first read the excellent 74 page manual.

If you need more information, send SASE. Normally \$24.95 + \$2 S/H in the USA, \$5 elsewhere. Mention this advertisement and enjoy a \$5 discount from...

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- No switches or jumpers to set.
- Fully Compatible with all standard software and hardware.
- 32K Cache Option increases TransWarp GS speed up to 20%.

Retail price for the TransWarp GS with 32K Cache \$399

RamWorks III

Memory card for the Iie.



\$109

**inCiders Peoples' Choice Award
A+ Readers' Choice Award**

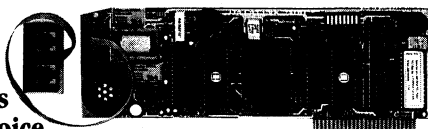
- Fits in the main memory slot.
- Extended 80 column card built-in.
- Expands up to 1.5MB of memory with our optional 512K piggyback.
- Optional ColorLink RGB card for razor sharp color.
- AppleWorks Expansion Software included.

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\$139

DataLink 2400

*Internal modem for
Apple II+, Iie and IIGs.*



**inCider's
Editors' Choice**

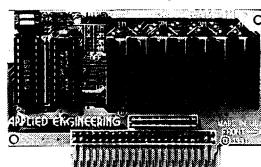
- 300, 1200, 2400 bps Hayes compatible modem.
- Fits in any slot except three, no serial card necessary.
- Comes with communications software and cables.

Retail Price for the Datalink 2400 bps modem \$219

Mention this ad and get ReadyLink free with purchase of DataLink

GS Ram III

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expansion card for the IIGs.*



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- Compatible with all standard IIGs hardware and software.
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- Uses new 1MBx4 Chips and accepts 3MB as valid configuration.
- Low power design for cooler operation.
- Compact, efficient design leaves plenty of room for slot 7 cards.
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- Super Hi-Res diagnostic software included.
- Includes AppleWorks 3.0 print buffer and disk save features.
- Made in the U.S.A.

Retail Price with 2MB of memory \$299

PC Transporter

Enables Apple II computers to Run MS-DOS.



\$479

- Runs IBM PC, XT, or IBM clone software.
- Has 640K of memory.
- Turns Apple II devices into IBM devices.

COMPLETE PC TRANSPORTER PACKAGE INCLUDES:

- PC Transporter with 640K memory.
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- Your choice of either a 5.25" TransDrive or 3.5" platinum drive.
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A Sophisticated Business Invoice Template

by Stan Hecker

Imagine that your small business sells navigational gear to recreational sailors and boat-chartering businesses. You have 14 or 15 unique products, you work out of your home or at trade shows, and your customers are primarily in your own state. You need a simple invoice that you can print quickly at busy spring-weekend boat shows.

This article describes how to add those features to last month's invoice template. Along the way it adds some useful features available only with AppleWorks 3.0. The template quickly produces point-of-sale invoices you can use to document and monitor your sales.

When you are done, your completed template will look like the example in *Figure 1*. A printed invoice will look like the example in *Figure 2*.

Your data entry screen will look the example in *Figure 3*. The vendor enters data in the area at the top of *Figure 3*. The lower half of the screen displays a running record of the transaction. To use the template, you fill in the date and the sequential invoice number. Then you put the cursor in column E and enter the number of items the customer bought. The template does all the necessary calculations.

Features and Assumptions

I designed this template for the small business owner who stocks up to 22 different inventory items (SKU's) and offers a few non-taxable services. You print the invoice on plain paper at 10 characters and six lines per inch.

The split screen lets you press Apple-K to:

- tell your customer the cost of the selected items (see *Figure 3*);

- split the transaction among any combination of cash, check, or credit card;
- show and print how much change you owe the customer on the transaction (see *Figure 4*).

As you can see from *Figure 1*, you use the first 70 rows to gather information about the order, method of payment, and the customer. This section follows the flow of a retail-sales order (the customer usually asks to buy a few products first, then there's a discussion of payment, then the vendor gets the customer's name and address.) The remainder of the template is the printable invoice, which doubles as a sales receipt.

As with last month's template, you will need to revise the sales tax calculations for your state.

“Here's a powerful invoice template for your business.”

Revising Last Month's Template

Follow these steps to prepare this template:

1. Load a copy of last month's INVOICE.TEMPL onto the AppleWorks desktop.
2. Use the Apple-N command to rename it to SPEED.INVOICE.

Be sure to save your work as it progresses.

3. Issue an Apple-V command and set the calculations to “Manual”.
4. Issue another Apple-V command to turn off protection while you build the new template.
5. Use the Apple-B command to clear the formulas from the Block of cells I19 through I40.

Figure 1: Final Invoice Template

```

=====A=====B=====C=====D=E=F=====G=====H=====I=====J=====K=====
1|      Enter today's date in any format which fits...
2|      but be sure to begin with a quotation mark----->
3|
4|
5|      Enter your sequential invoice number...
6|      no need to use quotation marks----->
7|
8|PRODUCTS--ALPHABETIC ORDER--ENTER QUANTITY TO BE BOUGHT
9|
10|
11|                                     ENTER
12|                                     HERE      (Price) (Stock #)
13|      Product Name                  | 0|      $0.00 Stock #
14|      Product Name                  | 0|      $0.00 Stock #
15|      Product Name                  | 0|      $0.00 Stock #
16|      Product Name                  | 0|      $0.00 Stock #
17|      Product Name                  | 0|      $0.00 Stock #
18|      Product Name                  | 0|      $0.00 Stock #
19|      Product Name                  | 0|      $0.00 Stock #
20|      Product Name                  | 0|      $0.00 Stock #
21|      Product Name                  | 0|      $0.00 Stock #
22|      Product Name                  | 0|      $0.00 Stock #
23|      Product Name                  | 0|      $0.00 Stock #
24|      Product Name                  | 0|      $0.00 Stock #
25|      Product Name                  | 0|      $0.00 Stock #
26|      Product Name                  | 0|      $0.00 Stock #
27|      Product Name                  | 0|      $0.00 Stock #
28|      Product Name                  | 0|      $0.00 Stock #
29|      Product Name                  | 0|      $0.00 Stock #
30|      Product Name                  | 0|      $0.00 Stock #
31|      Product Name                  | 0|      $0.00 Stock #
32|      Product Name                  | 0|      $0.00 Stock #
33|      Product Name                  | 0|      $0.00 Stock #
34|      Product Name                  | 0|      $0.00 Stock #
35|
36|
37|
38|Use the space between the lines to describe any services (not subject to
39|sales tax) provided--always begin on line 41:
40|
41|      |                               |
42|      |                               |
43|      |                               | Charge for
44|      |                               | these
45|      |                               | services---->      $0.00
46|      |                               |
47|
48|Enter the customer's sales tax status. Enter
49|"Interstate", "Mail Order", or an exemption number)----->
50|
51|      Press Apple-K to see the customer's total cost.
52|
53|USE THIS SECTION IF CUSTOMER IS PAYING NOW:
54|
55|      Enter the amount of payment beside      Cash----->      $0.00
56|      the METHOD of payment. Payments can      Check----->      $0.00
57|      be split--$10 cash, $10 VISA, etc...    VISA card-->      $0.00
58|      but not more than one credit card.      MC card---->      $0.00
59|Use a quote mark to enter either of the following, as needed:
60|If payment by check, enter a quote and the check number----->
61|If credit card, enter a quote and the authorization number-->
62|
63|

```

Sales of Products

Non-Taxable Services

Payment Information

Figure 1: Final Invoice Template (Continued)

=====A=====B=====C=====D=E=F=====G=====H=====I=====J=====K=====				
64	Customer Name/Address, within the lines:		(For each item below, start with a quotation mark)	
65				
66			The customer's:	
67				
68			PO Number --->	
69			Telephone	
70			Number ---->	
71				
72				
73	Charter Navigation Supply Company			
74	142 Waterfront Boulevard			
75	Grand Rapids MI 46612			
76	(517) 555-1212			
77				
78				
79				
80	Invoice Please enter a number in line 6.			
81	ERROR	INVOICE	Need date in line 2.	
82				
83	Customer Name/Address:			
84			Customer's	
85			Purchase Ord. #	
86				
87			Customer Phone #	
88				
89				
90				
91	Stock #	Description	Qty	Unit Price Total
92	-----	-----	----	-----
93			0	
94			0	
95			0	
96			0	
97			0	
98			0	
99			0	
100			0	
101			0	
102			0	
103			0	
104			0	
105			0	
106			0	
107			0	
108			0	
109			0	
110			0	
111			0	
112			0	
113			0	
114			0	
115			0	
116				
117				
118				
119				
120				
121				
122				
123		SUBTOTAL ABOVE		\$0.00
124		Sales Tax (4%)		\$0.00
125				
126				
127				
128				
129		TOTAL REMAINING DUE		\$0.00
130				

Customer Information

Printed Invoice

Sales Tax Table

\$0.00	\$0.00
\$.13	\$.01
\$.38	\$.02
\$.63	\$.03
\$.88	\$.04

Now you will add the new lines, formulas and text.
Continue as follows:

- Charter Navigation Supply Company
 142 Waterfront Boulevard
 Grand Rapids MI 46612
 (517) 555-1212

Invoice Number:
144

INVOICE

Apr 1, 1993

Customer Name/Address:

Charlevoix Classic Charters
 12735 Pa-Be-Shan Lane
 Charlevoix MI 49720-1077

Customer's
 Purchase Ord. #
 Customer Phone # 616-547-2195

Stock #	Description	Qty	Unit Price	Total
BBA-3	BBA Chart Kit Plastic Covers	3	\$14.95	\$44.85
BBA-2	BBA Chart Kit--Lake Huron	2	\$42.50	\$85.00
BBA-1	BBA Chart Kit--Lake Michigan	1	\$42.50	\$42.50
RT 417	Cruising Guide to Lake Huron	13	\$5.99	\$77.87
G114-7	Cruising Guide to Lake Michigan	11	\$5.99	\$65.89
D220	Dividers	3	\$11.52	\$34.56
G116-2	Fox Island Nature Guide	2	\$11.22	\$22.44
ER004	Hand-bearing compass--Electronic	1	\$142.50	\$142.50
DAV-014	Hand-bearing compass--Traditional	4	\$35.14	\$140.56
SM-084	Mackinac Island Tour Guidebook	3	\$5.25	\$15.75
MUCC055	MUCC Guide to Great Lakes Birds	7	\$11.55	\$80.85
MUCC152	MUCC Guide to Great Lakes Fish	7	\$8.55	\$59.85
R1124	Parallel Rulers	4	\$12.50	\$50.00
PC-18	Peterson's Charts--Lake Huron	2	\$36.50	\$73.00
PC-22	Peterson's Charts--Lake Michigan	2	\$37.50	\$75.00
		0		
		0		
		0		
		0		
		0		
		0		
		0		
		0		
		0		
	Shipping	###		(See Below)
	SUBTOTAL ABOVE			\$1,010.62
	Sales Tax (4% chart)			\$40.42
	Charge for Services Listed Above	###		\$32.50
	PAYMENT AMOUNT BY CHECK, USING CHECK #	Y114-2209		(\$1,100.00)
	YOUR CHANGE			(\$16.46)

My Favorite Template...

Non-Taxable Services

Now you will define the area where you will enter the non-taxable services. Continue as follows:

16. Type the directions from rows 38-39 in *Figure 1* into your template.

17. Copy the vertical lines in cells D29 through D34 to the clipboard. Then copy the clipboard contents into cells B41 and D41.

18. Type the label from cells G43 through G45 into your template.

19. Type a zero in cell I45.

Payment Information

Next, you will define the area where you will enter the payment information. Continue as follows:

20. Type the labels in rows 48 through 61 into your template.

21. Enter a zero in cells I55 through I58.

Your template should now look like the first 63 rows of the template in *Figure 1*.

Customer Information

Now you will create the customer information area. Follow these steps:

22. Enter the text in row 64 and in cells F64 through H70 (see *Figure 1*).

23. Copy the vertical lines from the clipboard into cells B65 and D65.

The Invoice

Next, you will create the invoice. The formulas in the invoice will copy the information from the appropriate cells in the work area above. Your return address should already appear in rows 73-76.

Continue as follows:

24. Put the cursor in cell A77, press Apple-B, and blank the block of cells from A77 through H87.

Figure 3: The Template on the Screen

File: SMITH.031693	REVIEW/ADD/CHANGE	Escape: Main Menu
=====A=====B=====C=====D=E=F=====G=====H=====I=====		
11		(Price) (Stock #)
12	BBA Chart Kit Plastic Cover	3 \$14.95 BBA-3
13	BBA Chart Kit--Lake Huron	2 \$42.50 BBA-2
14	BBA Chart Kit--Lake Michigan	0 \$42.50 BBA-1
15	Cruising Guide to Lake Huron	0 \$5.99 RT 417
16	Cruising Guide to Lake Michigan	0 \$5.99 G114-7
17	Dividers	3 \$11.52 D220
18	Fox Island Nature Guide	0 \$11.22 G116-2
19	Hand-bearing compass--Electronic	1 \$142.50 ER004
20	Hand-bearing compass--Traditional	0 \$35.14 DAV-014
=====A=====B=====C=====D=E=F=====G=====H=====I=====		
123	SUBTOTAL ABOVE	\$306.91
124	Sales Tax (4%)	\$12.28
125		
126		
127		
128		
129	TOTAL REMAINING DUE	\$319.19

E20 (Value, Value-F0, Protect-V) 0		
Type entry or use commands		
245K Avail.		

Figure 4: Closing the Sale

File: SMITH.031693	REVIEW/ADD/CHANGE	Escape: Main Menu
=====A=====B=====C=====D=E=F=====G=====H=====I=====		
53	USE THIS SECTION IF CUSTOMER IS PAYING NOW:	
54		
55	Enter the AMOUNT of payment beside	Cash-----> \$0.00
56	the METHOD of payment. Payments can	Check-----> \$1,100.00
57	be split--\$10 cash, \$10 VISA, etc...	VISA card--> \$0.00
58	but not more than one credit card.	MC card----> \$0.00
59	Use a quote mark to enter either of the following, as needed:	
60	If payment by check, enter the check number ----->	Y114-2209
61	If credit card, enter authorization number ----->	\$0.00
62		
=====A=====B=====C=====D=E=F=====G=====H=====I=====		
123	SUBTOTAL ABOVE	\$1,010.62
124	Sales Tax (4% chart)	\$40.42
125	Charge for Services Listed Above	### \$32.50
126		
127	PAYMENT AMOUNT BY CHECK, USING CHECK #	Y114-2209 (\$1,100.00)
128		
129	YOUR CHANGE	(\$16.46)

I61 (Label, Protect-L) Y114-2209		
Type entry or use commands		
245K Avail.		

25. Type "Invoice" in cell A80. Do not type the quotation marks.

26. Type "INVOICE" in cell C81. Use the Apple-L command to set the Label format to Right Justify.

27. Type the labels that start in cells A83, E84, E85, and D87.

Figure 5: Formulas

Cell	Formula
C80	<code>@IF(@OR(I6="",I6=0),"Please enter a number in line 6.", "Number")</code> [Displays a warning message if there is no invoice number in cell I6, or displays the word "Number".]
A81	<code>@IF(@OR(I6="",I6=0),@ERROR,I6)</code> [Displays the word ERROR to reinforce the warning in the line above, or displays the invoice number in cell I2.]
I81	<code>@IF(@OR(I2="",I2=0),"Need date in",I2)</code> [Displays the first phrase of a warning message if there is no date in cell I2; otherwise displays the date from that cell.]
I82	<code>@IF(@OR(I2="",I2=0),"line 2.", "")</code> [Displays the second phrase of a warning message if there is no date in cell I2; otherwise stays blank.]
C84	<code>@IF(C65>"",C65,"")</code> [Copies the customer's name from cell C65. The cell stays blank if cell C65 is blank.]
I85	<code>@IF(I68>"",I68,"")</code> [Copies the purchase order "number" (any combination of letters and numbers) from cell I68. This cell stays blank if cell I68 is blank.]
I87	<code>@IF(I70>"",I70,"")</code> [Copies the customer's telephone number from cell I70. This cell stays blank if cell I70 is blank.]
E93	<code>+E12</code> [Copies the quantity the customer bought of the first item.]
A93	<code>@IF(E12>0,I12,"")</code> [Copies the stock number for the first item.]
C93	<code>@IF(E12>0,C12,"")</code> [Copies the description of the first item.]
G93	<code>@IF(E12>0,G12,"")</code> [Copies the price of the first item.]
I93	<code>@IF(E12>0,E93*G93,"")</code> [Multiplies the unit cost by the number of items ordered.]
C116	<code>@IF(C41>"",C41,"")</code> [Displays the first descriptive line of any non-taxable services provided; otherwise the cell is blank.]
E116	<code>@IF(I45>0,###,"")</code> [Displays pound signs if there is a charge for the services provided. This is a reminder that says "See the footnote".]
I116	<code>@IF(I45>"", " (See Below)", "")</code> [Displays a message if there is a charge for services provided.]
I123	<code>@SUM(I92...I122)</code>
C124	<code>@IF(I49>"", "Exempt from State Sales Tax-Exempt", "Sales Tax (4%)")</code> [You enter a message like "Mail Order" or a state tax exemption number in cell I49 if the customer does not pay sales tax. This cell displays the beginning of a message. If the customer pays tax, the message says "Sales Tax (4%)". If the customer does not pay tax, the following four formulas continue the exemption message that appears on this line.]
D124	<code>@IF(I49>"", "i", " ")</code>
E124	<code>@IF(I49>"", "on", "")</code>
F124	<code>@IF(I49>"", "", " ")</code>
G124	<code>@IF(I49>"", I49, "")</code>
C125	<code>@IF(I45>0, "Charge for Services Listed Above", "")</code> [Prints a message if there is a non-taxable charge for services such as packing, shipping, and storage.]
E125	<code>@IF(I45>0,###,"")</code> [Displays three pound signs that tell the reader to "see the footnote" if there is a charge for the services provided.]
I125	<code>@IF(I45>0,I45,"")</code> [Displays the charge for non-taxable services such as packing and shipping.]
C126	<code>@IF(I55>0, "Cash Payment; Thank You", "")</code> [Displays a cash payment message if you enter a value greater than zero in the cash payment cell.]
I126	<code>@IF(I55>0,+I55*-1,"")</code> [Copies the cash payment as a negative number so the invoice calculates the total due correctly. The template uses the same logic to display the check and credit card payment amounts.]

Figure 5: Formulas (Continued)

Cell	Formula
C127	@IF(I56>0,"Payment amount by check, using chec","")
D127	@IF(I56>0,"k"," ")
E127	@IF(I56>0," #", "")
F127	@IF(I56>0,"", " ")
G127	@IF(I56>0,I60,"") [Displays the check number if payment is by check.]
I127	@IF(I56>0,I56*-1,"")
A128	@IF(@AND(I105=0,I106=0),"",@IF(I106=0," VISA"," MASTER")) [Allows three blank spaces between the " and the "V" of "VISA" and one blank space before the "M" of "MASTER". Uses nested @IF statements to determine whether to leave this cell blank or display "VISA" or "MASTER" in this cell.]
B128	@IF(I61=""," ","") [The formula displays a vertical line if the customer did not use a credit card. If the customer used a credit card, the formula leaves this cell blank. It is the beginning of a message line about card authorization. The spreadsheet uses the same logic in the next six formulas.]
C128	@IF(I61="","", "Credit Card Authorization Number")
D128	@IF(I61="","", "-")
E128	@IF(I61="","", "----")
F128	@IF(I61="","", ">")
G128	@IF(I61="","", I61)
I128	@IF(I61="","",@IF(@AND(I57>0,I58>0)," 2 CARDS?", (I57+I58)*-1)) [Displays a warning message if the customer used two credit cards. Otherwise the formula determines the amount of the credit card payment. It can sum the two cells because one cell must be zero.]
C129	@IF(@SUM(I123...I128)<0," YOUR CHANGE"," TOTAL REMAINING DUE") [This formula replaces "TOTAL DUE" in cell C129.]
I129	@SUM(I123...I128)

28. Put the cursor anywhere in row 88, press Apple-I, and insert two rows into the template.

29. Put the cursor anywhere in row 100, press Apple-I, and insert eight rows into the template. This will break the vertical lines within the template, but you will soon copy cells into this new empty area.

Formulas

The formulas in the template transfer the data from the data entry area to the printable invoice. The formulas also calculate the sales tax, give you room for any discounts or adjustments, display the customer's payments, and compute the total. Continue as follows:

30. Enter the formulas from *Figure 5* into the template.

31. Copy the formula in cell C84 into cells C85 through C89. Press Apple-R to answer "Relative" to all the "Reference to ??" questions.

32. Copy cells A93 through I93 into rows 94 through 115. Press Apple-R in response to the "Reference to ??" question.

33. Copy cell C116 into cells C117 through C122. Select "No Change" in response to the first "Reference to cell C41" question and "Relative" in response to the second "Reference to cell C41" question.

Protect Your Work

Now you will protect your work. Follow these steps:

34. Put the cursor in cell A1, issue an Apple-L command, and protect the block that defines the entire spreadsheet (cells A1 through L130). Allow "Nothing".

35. Use the Apple-L command to reduce the protection of the cells listed in *Figure 6*.

36. Go to cells C12 through C34, G12 through G34, and I12 through I34 and enter the item names, prices, and stock numbers for the items in your inventory. Cells I12 through I34 only accept

Figure 6: Cell Protection Guide

<u>Cell or Cell Range</u>	<u>Protection Level</u>
I2	Labels Only
I6	Values Only
C12 through C34	Labels Only
E12 through E34	Values Only
G12 through G34	Values Only
I12 through I34	Labels Only
C41 through C46	Labels Only
I45	Values Only
I49	Anything
I55 through I58	Values Only
I60 through I61	Labels Only
C65 through C70	Labels Only
I68	Anything
I70	Labels Only

labels. Type a quotation mark before entering any stock number that starts with a numeral.

37. To create the independent windows, scroll down until line 130 is the last line visible at the bottom of the screen. Move the cursor to line 123, issue an Apple-W command, and select "Top and Bottom". Press Apple-J to return the cursor to the upper window.
38. Save your template. Then lock the file with Time-Out FileMaster, Copy II+, BASIC, or another utility. [Ed: For step-by-step directions, see the article entitled "How to Lock Your Templates" in the May 1991 issue of the **AppleWorks Forum**.]

Using the Template

Follow these steps to use the template:

1. Load a copy of the template onto the AppleWorks desktop.
2. Press Apple-N and assign some meaningful name to the file. Consider using the customer name and date, as in "SMITH.031693".
3. Enter the date in cell I2 and the sequential invoice number in cell I6.
4. Enter the number of items purchased in cells E12 through E34.
5. Press Apple-K to see the value of the customer's choices.
6. If you sold something not subject to tax, enter a description in the area starting in cell C41.

AppleWorks will make the appropriate changes to the invoice when you press Apple-K.

Printing the Invoice

Now you are ready to print the invoice. Follow these steps:

1. Press Apple-J to jump from the top window to the bottom window.
2. Move the cursor to cell I130.
3. Press Apple-P and choose "Block".
4. Press Apple-Left-Arrow to highlight row 130.
5. Press Apple-Up-Arrow to highlight through row 73.
6. Press the Return Key and print.

Conclusion

This a complex and powerful template that demonstrates the power of AppleWorks for a retail business user. It will take a while to create the template, but it will quickly make up for the time and effort you put into this project.

[Stan Hecker is on the administrative staff at Michigan State University, East Lansing, Michigan, and is a partner in H&H Consulting, a Michigan concern specializing in school district financial and population analyses.]

*[A working copy of this template appears on this month's issue of **NAUG on Disk**, which costs \$10 from NAUG. This template requires AppleWorks 3.0. NAUG on Disk requires a 3.5-inch disk drive.]*

Special Offers

Special Price for Express 2.0

NAUG members can now get special discount prices on Express 2.0, Seven Hills' new Apple IIGs print spooler. The review of Express in last month's issue of the **AppleWorks Forum** describes how Express can dramatically enhance the performance of your system. Express requires an Apple IIGs equipped with a hard drive and any direct connect printer except a StyleWriter. Express 2.0 lists for \$49.95. Until June 1, NAUG members can buy Express directly from NAUG for \$34.95 plus \$3.50 s/h.

File Edit View Special
11:19

About the Manager
⌵

The Manager

The Manager brings all the power of the Macintosh MultiFinder to your Apple IIGS. Install The Manager and you can switch between 16-bit applications with a single keystroke. No more long waits while you quit and relaunch your programs. The Manager provides an enhanced clipboard that lets you transfer data between programs.

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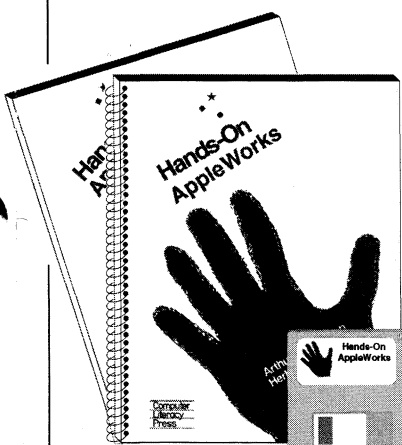
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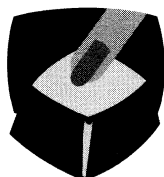
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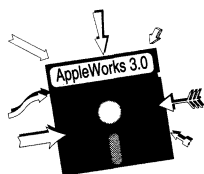
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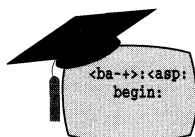
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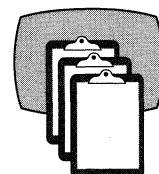
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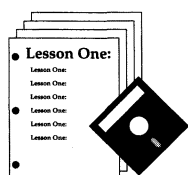
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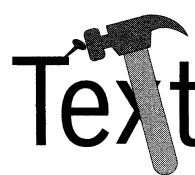
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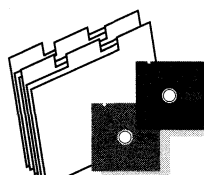
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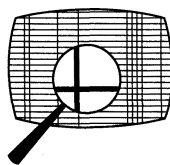
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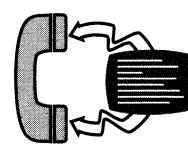
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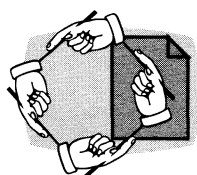
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* A stand-alone application, not a TimeOut module.

How to Remove Files Quickly

by Keith Johnson

Think of all the times you change an AppleWorks file and then want to remove the file from the desktop without saving it. This happens when you use <oa-R> to look at some data base records but do not want to save the new selection rules. It also occurs when you print or paginate a word processor document already on your disk.

Removing a file takes six steps. You must go to the Main Menu, choose "Remove files", select the files you want to remove, press the Return Key, choose "Throw out the changes to the file", and respond "Yes" when AppleWorks asks "Are you really absolutely positively sure in your heart of hearts that you truly want to remove this file?"

This is acceptable when you remove only one file. But those of us who load the desktop with 10 or 12 files have to repeat this process for each file we want to discard.

This month's macro quickly removes any number of files you specify without saving them. But here's a warning: The files you remove are instantaneously gone from memory. Be certain that you do not need to save your work before you run the macro. The macro works with UltraMacros 3.x and Ultra 4.x.

How to Use the Macro

Follow these steps to add the macro to your default set and use the macro:

1. Type the macro into your macro file.
2. Compile the file and save it as your default macro set. *[Ed: See the sidebar "How to Add a Macro" for step-by-step directions that describe how to add the macro to your default macro set.]*
3. Press <ba-#> whenever you want to remove files from the desktop. (Note that you must press four keys: the two Apple Keys, the Shift Key, and the "3" key. I purposely assigned the macro to a key combination that you would not press unintentionally. You can change these keys, but I suggest that you not use a combination that is easy to press.)
4. The macro displays a list of the current desktop files. Use the arrow keys to select the files you want to remove. If you change your mind, press the Escape Key to return to the Main Menu.
5. When you are satisfied with your selections, press the Return Key. The macro will remove the files from your desktop and will leave you at the Main Menu.

Technical details

The macro uses the <keyto> command rather than <input> so it can detect if the user pressed the Escape Key. (<keyto> sets variable z equal to zero

Figure 1: Desktop File Remover Macro

```
<ba-#>:<all                { Define the macro.                                }
><oa-Q : esc>4<rtn :        { Go to the Remove Files Menu.                    }
keyto 13 :                  { Accept input until the user presses the Escape or Return Key.  }
if z = 0 esc :              { If the user pressed the Escape Key, return to the Main Menu... }
  stop : endif :           { ...and stop.                                          }
rtn :                       { Otherwise, start the file removal process.        }
begin :                    { Start the loop.                                          }
  x = peek $ef2 :          { Are we at Main Menu yet?                                }
  ifnot x = 6 :             { If not...                                              }
    up : rtn>Y<             { ...remove the current file without saving...          }
    rpt>!                   { ...and go to next file.                                }
```


A Macro that Corrects for Hand Shifting

How often have you sat down at your keyboard, started typing into a word processor document, and found that your hands somehow landed one key to the right of where they were supposed to be? You may then find yourself typing "Dqrs! yjr dqrrvj, O qtsu upi, sd O jsbr qtpmpimvrf oy yp upi, ytoqqomhau pm yjr ypmhir," instead of "Speak the speech, I pray you, as I have pronounced it to you, trippingly on the tongue."

Rather than lifting up your hands and moving them to the left every time this happens, you can use the macro in *Figure 1*. This macro converts your keystrokes so they enter the character to the left of the key you strike on the keyboard. Punctuation marks and numbers are unaffected. But most typists have to look down at the keyboard to type these characters anyway.

This macro will work with AppleWorks 3.0.2 and UltraMacros 3.14159. To make it work with Ultra 4.212B, change all the <endif> statements to <ausgehen>, add <label Alpha-Bravo> to the beginning of your macro table, delete all <getwired> commands, and.... On second thought, this macro won't work with Ultra 4.212B.

How to Use the Macro

1. Enter the macro in your default macro set, recompile, and save as a new default set. *[Ed: If you don't know how to do this, you may contact the author by phone after midnight. Anyone who sub-*

Figure 1: Hand-Shift Macro

```
<ba-x>:<awp><                                { Define the macro.                                }
z = 37                                { Set z = 37 to confuse the reader.                }
$7 = chr$ z :                          { Translate to ASCII string to confuse the writer.    }
begin :                               { Start the loop.                                }
y = 0 :                                { Set a variable to store the upper-case flag.      }
x = key :                              { Capture the keypress.                            }
$1 = chr$ x :                          { Convert the keypress to a character string.    }
if x > 64 and x < 91 y = 1 : { If the keystroke is a capital letter, set the flag... }
endif :                               { ...and end the loop.                                }
if x > 96 and x < 123 y = 1 : { If the keystroke is a lower case letter, set the flag... }
endif :                               { ...and end the loop.                                }
if x = 27 stop :                       { If the user got panicky...                          }
endif :                               { End the loop without setting the flag.            }
if y = 1 sa-5 :                        { Run the <sa-5> subroutine if the user entered a letter. }
endif :                               { Do we really need all these endifs?                }
print $1 :                             { Print the converted character.                    }
rpt>!                                  { Macros don't get bored...so do it again...    }

5:<asr><                                { Conversion subroutine.                                }
if $1 = "w" $1 = "q" : exit : endif :
if $1 = "e" $1 = "w" : exit : endif :
.
. [This subroutine is too long for this space. Interested readers
. may obtain the complete macro by submitting $475 to the author in
. small, unmarked bills.]
.
if $1 = "z" $1 = "m">!
```

mits an article like this deserves those calls.]

2. When you find your hands straying to the right, press <ba-ctrl-shift-&>, and the macro will convert all the following keystrokes for you. If you suddenly find your hands back in their proper positions, press the Escape Key to end the macro.

Technical Details

This macro uses the "=" function repeatedly. If this function does not work in your version of UltraMacros, you need to upgrade to a current version. Dig out your original disk, take it to your Burgle Buddy, and ... oh, yeah, that won't work any more, will it? Well, try it without the "=".

The character-conversion table will have to be adapted for those unusual people whose hands tend to shift to

the left instead of to the right. I leave this as an exercise for the reader. If your hands shift in other directions, I hope you drive a car equipped with automatic transmission.

[Keith Johnson is Disassociated Director of the Flashback Planetarium, and wonders why NAUG is still letting him get away with this stuff.]

[A reasonably-close-to-working copy of this macro appears on this month's NAUG's Slipped Disk, which costs a fortune from NAUG. But you'd really prefer to type this thing, wouldn't you?]

[Ed: The author indicated he would install this macro in his supervisor's system for April Fool's Day. We wonder if any readers have a position for a soon-to-be-unemployed astronomer. By the way, the macro really works and is on this month's issue of NAUG on Disk which costs \$10 from NAUG.]

How to Add a Macro

Follow these steps to add macros to your default macro set:

1. Skip to step #4 if you already have a word processor document that contains your current default macros. Otherwise, create a new word processor document called "Macros".
2. Press <oa-esc> to access the TimeOut Menu and select "Macro Compiler" (or "U4 Compiler" if you use Ultra 4).
3. Select choice #2, "Display current macro set", and press the Return Key. The UltraMacros Compiler will convert your active macros into word processor format and enter the macros in the "Macros" document.
4. Put the cursor on a blank line at the end of the document and

type the new macros. Be careful with your typing: the Compiler is finicky about format.

5. Press <oa-s> to save the document in AppleWorks format in case anything goes wrong.
6. Press <oa-esc> to access the TimeOut Menu and select "Macro Compiler". (Ultra 4 users will choose the U4 Compiler.)
7. Highlight choice #1 ("Compile a new set of macros") and press <oa-rtn> to compile your macros. The Compiler will stop and identify any mistakes you made when typing the macros.
8. Test the new macros. That will help you catch any errors in your logic.
9. Now you will save the revised macro set as your default set.

Press <oa-esc> to access the TimeOut Menu and select "Macro Options". (Ultra 4 users, select "U4 Options".)

10. Select choice #3 ("Save macro table as default set") and press the Return Key. Macros Options asks if you want to "Activate autostartup macro". Respond "Y" if you want UltraMacros to automatically run the first macro in your macro set each time you launch AppleWorks; otherwise, select "N". In the future, UltraMacros will install the new set of macros each time you launch AppleWorks.

Mark Munz's book, the *UltraMacros Primer* [\$17.95 plus \$3.50 s/h from NAUG] contains comprehensive information to help you use TimeOut UltraMacros.

when the user presses the Escape Key.)

Determining when to terminate the macro is a problem because AppleWorks removes all "unchanged" and "saved" files without user input. The macro <peek>s memory location \$ef2 to detect if it deleted all the files and returned you to the Main Menu.

Location \$ef2 contains the number of items in the current numbered menu. For instance, \$ef2 contains "6" when you display the Main Menu, since that menu contains six items. \$ef2 contains a zero when there is no numbered menu on the screen. By checking the value of \$ef2, the macro can determine if your screen is back at the Main Menu. (I learned this technique by studying the macro written by some unknown author for the old TimeOut MacroEase disk. My thanks to whoever wrote that routine for solving a problem that plagued me for months.) ■

[Keith Johnson is Associate Director of the Fleischmann Planetarium at the University of Nevada.]

[Ed: This macro also appears on this month's issue of *NAUG on Disk*, which costs \$10 from NAUG. *NAUG on Disk* requires a 3.5-inch disk drive. The macro requires AppleWorks 3.0 enhanced with UltraMacros 3.1 or 4.x. An annual subscription to *NAUG on Disk* costs \$90.]

NAUG BBS

Congratulations to Doug Walters of Akron, Ohio, the 80,000th caller to the Electronic Forum, NAUG's AppleWorks Bulletin Board. Mr. Walters won a one-year extension to his NAUG membership. Call the Electronic Forum for help with AppleWorks or to download templates, fonts, or utility programs. A free service of NAUG. (615) 359-8238.

How to Use Debug

by Randy Brandt

This is the seventh in a series of articles that describes how to use the new features of Ultra 4. The author assumes that you know the basics of TAPL (The AppleWorks Programming Language), that you read the previous articles in this series, and that you installed Ultra 4.2 and all its commands in your system.

Your copy of Ultra 4 includes Debug, an Ultra 4 utility that pops up inside AppleWorks and facilitates your TAPL programming. Debug displays and lets you change your Ultra 4 variables, even while you run a TAPL program. Debug also displays the names of all your current macros, displays all your installed dot commands, and lets you invoke trace options that monitor your variables while you run a TAPL program.

Using Debug

Let's explore Debug. Follow these steps:

Press <oa-ctrl-X> (<oa-clear> on the Apple IIGs) to access Debug and to display the first page of the Debug display (see *Figure 1*). (You can use a <debug> token or a "break point" to launch debug from within a macro, but more about that later.)

Numeric Variables

Debug displays the Ultra 4 numeric variables on the upper left-hand portion of the screen, with the variable name followed by the current hex and decimal value of the variable.

The Arrow Keys and <oa-up> and <oa-down> keystrokes let you scroll and page through the list. *Figure 1* displays array zero. Pressing <oa-0> through <oa-9> displays the corresponding array; for example, <oa-5> shows A(5), B(5), and so on.

Highlight a variable and press the Return Key to edit the value. Debug will display the current value

Figure 1: Debug Main Screen

None Ultra Debug v2.3 Copyright 1992 Mark Munz & Randy Brandt			
A (0) : \$0000, 0		00 : 10 :string one	
B (0) : \$0000, 0		01 : 01 :S	
C (0) : \$0002, 2		02 : 03 :	
D (0) : \$0005, 5		03 : 05 :Sixth	
E (0) : \$0006, 6		04 : 00 :	
F (0) : \$0000, 0		05 : 00 :	
G (0) : \$0000, 0		06 : 00 :	
H (0) : \$0000, 0		07 : 00 :	
I (0) : \$0000, 0		08 : 00 :	
J (0) : \$0000, 0		09 : 00 :	
K (0) : \$0000, 0			
L (0) : \$000B, 11		Onerr Status: Off	
M (0) : \$0000, 0		Sleep Macro: None	
-D Dot cmds	-X Xtnd nums	Trace Options	Name: michael
-M Macros	-V View scrn	Numeric: No	Pr# : 0
-P Peek vals	-B Break opt	Strings: No	Defined: 1
-T Trace opt	-S Save Info	Macros: No	Length: \$001F, 31
-N End macro	-W Walk thru	Break: Off	
string one			
Type entry or use commands			02/16/93 7:22

at the bottom of the screen where you can enter a decimal or hexadecimal value (enter a "\$" before you type the hex value).

Press the Tab Key to move the highlight bar to the string variables.

String Variables

Debug displays the string variables on the upper right-hand portion of the screen, with the variable name followed by the string length and the text of the string. Highlight a variable and Debug displays the complete string at the bottom of the screen, with inverse text representing control characters.

Pressing <oa-0> through <oa-9> displays the ten strings in that group. For example, pressing <oa-5>

A Bit of History

The earliest version of a Debug-style application was TimeOut Debug, introduced on the TimeOut MacroTools disk. The early Debug displayed and let you edit all 10 string and 26 numeric variables. Debug also displayed the size of the macro table, <onerr> status, and some additional information. You would access Debug via the TimeOut Menu when macro programs were not running.

I began to modify Debug for Ultra 4 and eventually turned the program into an init accessed by Open-Apple-Control-X instead of a TimeOut application. Then Mark Munz called to say that he sent me a surprise on GENie. When I downloaded the file, it resembled the current Debug main screen, displaying numeric and string variables in list form for easy access. We began brainstorming with the goal of making Debug as powerful as possible, and after a few design changes it became the useful tool we envisioned.

Display Items

The Debug screen also displays the status of a number of items that you cannot alter with the program. For example, "Onerr Status" in the right column on the screen indicates the current <onerr> flag setting, usually "Off".

"Sleep Macro" displays the name of any defined sleep macro, along with the time it will activate.

"Name" displays the name of the current macro set.

"Pr#" displays the <print> output slot, normally zero (which is the screen).

"Defined" indicates the number of macros in the current set.

"Length" indicates the length of the current macro set.

The rest of the screen displays the trace options that I will describe later and provides a small help screen showing the available Open-Apple commands. Let's explore these commands.

<oa-D>: Dot Commands

Press <oa-D> to display the dot commands installed in your system (see Figure 2).

Debug displays the name and syntax for each command; every "#" represents a numeric variable or value, and every "\$" represents a string. From example, <.OnGosub #,\$> signifies that the <.OnGosub> command takes one numeric and one string variable.

Figure 2: Dot Commands Display in Debug

None Ultra Debug v2.3 Copyright 1992 Mark Munz & Randy Brandt	
MENUTOOLS2	STUFF
.AskYN \$.DropDir
.Box #,#,#,#	.Line #,#,#
.TitleBox #,#,#,#,\$.MSay \$
.Fcard #,\$,#	.PeekVar #,#,#
\$=.GetString \$,\$,#	.PokeVar #,#,#
\$=.GetInput #,\$,\$,\$	#=.PeekWordZp #
#=.GetValue \$,#,#	.PokeWordZp #,#
.List #,#,#,#,#,\$	#=.RightMost
\$=.MenuItem	.SetCol #,#
.OnGoto #,\$	\$=.SubChar \$,#,#
.OnGosub #,\$	#=.TOinMem
\$=.Pick #,#,#,#,#,\$.Uncache \$
.Therm #,#,#	.VLine #,#,#
.MacroNames	\$=.ZapChar \$,#
.MacroNames	.MenuBar2 \$,\$,#
<--	
Type entry or use commands	1366K Avail

displays strings 50 through 59.

To edit a string, highlight the string and press the Return Key. The cursor will move to the bottom of the screen where you can edit the text. The ruler on the line above the string shows you the length of the string. When you are done, press the Return Key.

Press the Tab Key to switch back to the numeric variables.

An arrow at the bottom of the screen indicates that you can view other dot command sets by pressing the cursor key corresponding to the arrow. You can also press the Tab Key or <oa-Tab> to move through the sets.

Press the Escape Key to return to the main screen.

Figure 3: Debug Peek Values Screen

```
None      Ultra Debug v2.3  Copyright 1992 Mark Munz & Randy Brandt
-----
1.  $0AFE W:$541E , 21534 "T."
2.  $0AFE B:$001E , 30  "...
3.  $0AFE S:"Type entry or use . commands "
4.  $0AFE R:1E 54 79 70 65 20 65 6E 74 72 79 20 6F 72 20 75 .Type entry or
5.  $0300 S:" "
6.  $0300 S:" "
7.  $0300 S:" "
8.  $0300 W:$2001 , 8193  "...
9.  $0300 B:$0001 , 1  "...
10. $0000 W:$0000 , 0  "...
11. $0000 W:$0000 , 0  "...
12. $0000 W:$0000 , 0  "...
13. $0000 W:$0000 , 0  "...
14. $0000 W:$0000 , 0  "...
15. $0000 W:$0000 , 0  "...
16. $0000 W:$0000 , 0  "...
17. $0000 W:$0000 , 0  "...
18. $0000 W:$0000 , 0  "...
19. $0000 W:$0000 , 0  "...
20. $0000 W:$0000 , 0  "...
-----
Type number, or use arrows, then press Return      02/16/93  7:48
```

“Raw Data” displays the sixteen bytes beginning with the address as hex data, followed by their ASCII equivalents.

Pressing <oa-S> (documented below) saves the peek addresses so you do not have to enter them every time you run AppleWorks.

<oa-T>: Trace Option

“Tracing” lets you monitor changes in your variables and see which macro you are executing. Tracing displays this information at the bottom of the screen until you press a key to continue.

Press <oa-T> to display the trace options. The following prompt appears:

```
Change Trace Option for? Numeric String
Macros  Clear All  Break Pts
```

<oa-M>: Macros

Now press <oa-M> to display a list of the currently defined macros displayed in the order you defined them. Select the “Alphabetical” option to sort the names. (The alphabetical sort makes it easy to see which macro names are still available and to identify any duplicate names.) Select “Original” to restore the definition order. Then press the Escape Key.

<oa-P>: Peek Values

Press <oa-P> to display the Peek Values screen, which displays the values for twenty different memory locations (see *Figure 3*). Highlight one of the locations and press the Return Key; Debug will prompt you to enter an address. You can enter a decimal value or a hex value (precede hex numbers with a “\$”). Debug prompts you for the display type:

Display as? Word Byte String Raw data

“Word” displays the two bytes beginning with the address.

“Byte” displays the address value.

“String” uses the address as the length byte and displays the succeeding bytes as a string.

“Numeric” displays each numeric variable. Selecting “No” from the Numeric Menu cancels tracing. Selecting “Set” from that menu displays each numeric variable being changed (or “set”) by your macro. Selecting “Get & Set” displays every numeric variable being accessed by your macro.

“String” lets you trace string variables. Selecting “No” from the String Menu cancels tracing. Selecting “Set” from the String Menu displays only the string variables being changed. Selecting “Get & Set” displays each string variable being accessed by your macro.

“Macros” lets you see when Ultra 4 begins executing a new macro. Debug displays the macro name until you press a key to continue the macro.

“Clear All” turns off tracing and all the trace options.

“Break Pts” lets you turn break point tracing on or off. For more information, see the section on break points below.

<oa-N>: End Macro

The <oa-N> command stops the current macro (the name of that macro appears at the top left of the screen). But <oa-N> only works if you used a

<debug> command within a macro or a break point to put you into Debug.

<oa-X>: Extended Variables

<oa-X> displays the extended variables provided by the I.UM.MATH init. (See *Figure 4* and last month's UltraMacros Primer article for more information about these variables.)

Pressing a letter from A through Z lets you modify an extended variable. Press the Escape Key to exit the Extended Variables screen.

<oa-V>: View Screen

Press <oa-V> and Ultra 4 displays the text screen as it looked when you launched Debug. Press the Escape Key to return to the Debug main screen.

<oa-B>: Break Points

Break points are values you set which tell Ultra 4 to break out of its normal processing. For example, you can tell Ultra to break whenever D(2) becomes equal to 21. When that happens, Ultra 4 lets you continue or enter Debug. You can then use Debug to check other values, view the screen, or change the contents of your variables.

The <oa-B> command displays Debug's Break Point screen that contains up to ten numeric and ten string conditional break points (see *Figure 5*).

When you run a macro, Ultra 4 monitors all the conditionals you set using <oa-B>. That slows down program execution, but otherwise lets your program run normally until a conditional evaluates to "true". Then the macro stops and displays the Debug Main Screen in *Figure 1*.

To set a numeric break point, you highlight an entry, press the Return Key, and enter a variable name. Debug will prompt you to enter the array number (0-9) and the operator. Debug displays

A (0)? <> >= > = =< <

Figure 4: Extended Variables Display

None	Ultra Debug v2.3	Copyright 1992 Mark Munz & Randy Brandt

Extended Variables		
`A :	21345678.51	`N : 0.00
`B :	0.00	`O : 0.00
`C :	0.00	`P : 0.00
`D :	0.00	`Q : 0.00
`E :	0.00	`R : 0.00
`F :	0.00	`S : 0.00
`G :	0.00	`T : 0.00
`H :	0.00	`U : 0.00
`I :	0.00	`V : 0.00
`J :	0.00	`W : 0.00
`K :	0.00	`X : 0.00
`L :	0.00	`Y : 0.00
`M :	0.00	`Z : -12345678.90
xFixed (fix decimal places at 0, 1, 2, or use 128 for appropriate): 2		
xIntegers (treat Ultra variables as hundredths if 0 or integers if 1): 1		

Type variable name to modify:		1363K Avail

Figure 5: Break Points Screen Display

```
None      Ultra Debug v2.3  Copyright 1992 Mark Munz & Randy Brandt
-----
Numeric Conditionals:
1.      A(3) <> 3           6.      F(6) < 7
2.      B(1) >= 2          7.      =====
3.      C(0) > 89          8.      =====
4.      D(2) = 21          9.      =====
5.      E(5) =< 45          10.     =====
-----
String Conditionals:
1.      $01 starts with "Hi"
2.      $29 contains "How"
3.      $98 equals "are you?"
4.      =====
5.      =====
6.      =====
7.      =====
8.      =====
9.      =====
10.     =====
-----
Type number, or use arrows, then press Return                                1356K Avail
```

<> means "not equal to", >= means "greater than or equal to", > means "greater than", = means "equal to", =< means "equal to or less than", and < means "less than".

After you select an operator, Debug prompts you to enter the value to complete the equation. Enter a number from 0 to 65535.

To set a string break point, press the Tab Key to switch to the string portion of the screen, highlight a break point, press the Return Key, and enter the string number (0-99). Then choose either "starts with", "contains", or "equals" and enter the text to

complete the equation. Do not worry about upper and lower-case entries; Debug is not case sensitive.

To remove a break point, press <oa-B>, highlight the break point, and press <oa-Delete>.

<oa-S>: Save Information

This command saves your current break point and peek value definitions so you do not need to retype them the next time you run AppleWorks. You will want to use <oa-S> regularly when you work on your TAPL programs. Remember to launch Debug, then press <oa-S>.

<oa-W>: Walk Through

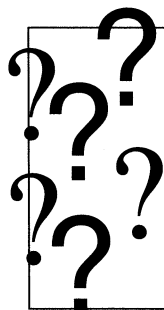
The <oa-W> keystroke activates single stepping which lets you "walk through" a macro.

<oa-W> works well with the <debug> statement. For example, you can use a <debug> command to get into Debug during a macro, then press <oa-W> to activate single stepping and step through the macro from the point where you called Debug. To cancel single stepping, press the Return Key while Ultra is waiting for a keystroke before it executes the next step in the macro.

Conclusion

As you can see, Debug is an important tool to the TAPL programmer. The program helps you debug your macros and also serves as a handy syntax reference for the dot commands.

[Randy Brandt, who owns JEM Software, is the author of Ultra 4 and many other AppleWorks enhancements. He is available for custom TAPL programming. GENie users can contact Randy in category 34 of A2Pro. Others can write to him at 7578 Lamar Court, Arvada, Colorado 80003, or send a fax to (303) 422-4856.]



Need answers to your
AppleWorks questions?

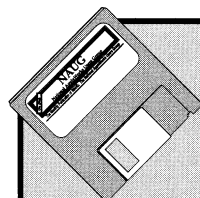
Call NAUG's Members Helping
Members volunteers listed in the
AppleWorks Forum for the help you
need.

A More Attractive AppleWorks Forum

Did you notice the subtle differences in the quality of the fonts and figures in this issue of the *AppleWorks Forum*?

The declining prices of computer-based Linotronic output now lets us use 2032 dpi output to produce the master pages for the *AppleWorks Forum*.

We produced the masters for the earlier issues on NAUG's 300 dpi LaserWriter IIf. The issues, written in AppleWorks and formatted in Quark Xpress on a Macintosh, now go to our printer on disk. The printer uses those files to produce high quality images directly on the film they need to prepare the metal plates used to print the *AppleWorks Forum*. The digital technology lets the printer produce higher quality pages with less work and with no increase in cost to NAUG.



NAUG on Disk

A monthly disk that saves you time and makes you more productive with AppleWorks. Each issue of NAUG on Disk includes:

- An electronic copy of the *AppleWorks Forum*.
- Working copies of all macros and patches.
- Working versions of all templates.
- An update to the Electronic Index.
- Public domain templates, utilities, and programs.
- Unpublished articles.

12 month subscription: \$90

Single disk: \$10 postpaid

For a table of contents, send a SASE to:

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(313) 454-1115 • Fax (313) 454-1965

Prices are in U.S. Dollars. International orders by credit card only, international airmail postage additional. NAUG on Disk requires AppleWorks running on an Apple II or compatible equipped with a 3.5-inch disk drive. Many templates and macros require AppleWorks 3.0.

Special Offers for NAUG Members

AmperMacros-Plus

NAUG members can now get special discount prices on AmperMacros-Plus, a set of UltraMacros 3.1 and Ultra 4 enhancements for AppleWorks 3.0 users who write macros and task files. AmperMacros-Plus, which contains 60 "&-commands" for UltraMacros 3.1, replaces the 36 commands previously available with AmperMacros and AmperMacros-II.

AmperMacros-Plus also contains 50 Dot Commands for Ultra 4.x, which brings the power of the &-commands to the latest version of UltraMacros.

AmperMacros-Plus, which is compatible with TotalControl, supports full floating point math, integer math, date and time calculations, text operations, and user interface functions.

AmperMacros-Plus also includes an AppleWorks Launcher Program that lets Apple IIGS users run AppleWorks and load a selected file onto the AppleWorks desktop by double-clicking on the file.

AmperMacros-Plus costs \$30. However, NAUG members can buy the program directly from the publisher for \$20 (s/h included). Specify 5.25-inch or 3.5-inch disks and identify yourself as a NAUG member when you order. Office Productivity Software maintains a policy of satisfaction guaranteed or your money back.

[Office Productivity Software, Box 2132, LaGrange, Georgia 30240.]

Apple II Guides

NAUG members can still get special prices on volumes one and two of the *Apple II Guide* published by Apple Computer. Volume one (240 pages) includes technical articles about networking and data exchange, troubleshooting, GS/OS, and an overview of popular Apple II applications such as AppleWorks, video production, hypermedia, and telecommunications.

Volume two (205 pages) includes articles that describe the history of the Apple II, the fundamentals of computing, how to share data with Macintosh computers, how to connect an Apple II to a LaserWriter, and how to network an Apple II. Other articles describe AppleWorks tips, telecommunications strategies, and applications of hypermedia.

Each volume of the *Apple II Guide* lists for \$19.95, however NAUG members can get the two volume set for \$9.95 plus \$5 s/h directly from NAUG. NAUG accepts Visa and MasterCard. Payment must accompany purchase orders. All products purchased from NAUG are covered by the organization's policy of "satisfaction guaranteed or your money back".

[Apple II Guides, NAUG, Box 87453, Canton, MI 48187; (313) 454-1115; Fax: (313) 454-1965.]

Apple Expo West

Here's a reminder about the Apple Expo West show and exhibit that will be held at Brooks Hall in San Francisco on April 23rd through 25th. Please stop by the NAUG booth (booth #242) and say "hello" to Ed Matlock and Terry Higgins and the volunteers from the San Leandro Apple Users Group and the SPC Apples Group from Freemont, California. Also ask about the special discount prices on the NAUG books and disks available at the show.

Our thanks to the organizers and to these active Apple II user groups for staffing the booth for NAUG. Enjoy the show!

Contact Events Specialists, organizers of Apple Expo West, for more information about tickets and the show schedule.

[Events Specialists, 17 Lilac Road, Sharon, MA 02067; (800) 955-6630; (617) 784-4531.]

Special Offers...

Macintosh Offers

NAUG members who use Macintosh computers qualify for the special offers arranged by NAUG's sister organization, the ClarisWorks Users Group (C•WUG). Current C•WUG offers include discounts of 60% - 70% on the popular Connectix line of Macintosh utilities including Connectix PowerBook Utilities (CPU), Virtual 3.0, Maxima, InfoLog, and Hand-Off.

NAUG members interested in music should ask about the 50% C•WUG discount on Super Studio Session and Jam Session, which let you compose music and play along with popular artists on a Macintosh.

The game players among us will appreciate the 50% discount that C•WUG arranged for Varcon's popular Diamonds 2 Space Invader/Brickles-type game and Jewelbox, a significant enhancement to the popular Tetris game.

Finally, astronomers and science teachers should consider the 40% C•WUG discount on MacStronomy, which displays color maps of the stars and planets and lets you fly through the galaxy.

For more information, send a self-addressed, stamped, business-size envelope to "C•WUG Offers", NAUG, Box 87453, Canton, Michigan 48187.

Cross-Works

Cross-Works is a file transfer utility that transfers and converts files between AppleWorks and popular MS-DOS programs on IBM-compatible computers. Cross-Works includes a cable to connect the two computers and software for both systems. You connect the computers, run Cross-Works, and follow the on-screen prompts to transfer the file.

Cross-Works can automatically convert between AppleWorks format and popular MS-DOS file formats such as WordPerfect, Lotus 1-2-3, dBase III and IV, and Microsoft Works. The transfer process preserves the format of the original document including boldface, underlining, subscripts, headers, centering, and the like. Transferred spreadsheets keep their formulas intact.

NAUG published a favorable review of Cross-Works in the May 1989 issue of the *AppleWorks Forum*.

Cross-Works lists for \$99.95. Until July 1, NAUG members can buy the program directly from the developer for \$59.97 plus \$4 s/h within the United States. Shipping to Canada and Mexico: \$6. Shipping to other countries: \$25. Indicate that you want the "NAUG special" and provide your NAUG membership number when you order.

SoftSpoken sells Cross-Works with an unconditional 30-day money back guarantee.

[SoftSpoken, Box 18343, Raleigh, North Carolina 27619; (919) 870-5694; Fax: (919) 870-5696.]

Hands-On AppleWorks

NAUG members can now get special discounts on Luehrmann and Peckham's popular *Hands-On AppleWorks* textbooks.

The *Hands-On AppleWorks Teacher's Set* for AppleWorks 1.x and 2.x includes softcovered student editions of the Hands-On Guide to the AppleWorks word processor (152 pages), data base (166 pages), and spreadsheet (160 pages). The kit also includes a copyable student data disk and a 74-page teacher's guide with exercises, tests, questions, and projects.

The *Hands-On AppleWorks 3.0 Teacher's Set* includes a 416-page spiral bound student manual, a 96-page teacher's guide, and a copyable data disk with exercises and lessons.

The lessons and other instructional materials are interesting, carefully sequenced, well written, and presented in a attractive two-color format. A favorable review of *Hands-On AppleWorks* appeared in the October 1988 issue of the *AppleWorks Forum*.

Each Teacher's Set lists for \$32.95. However, NAUG members can buy the materials directly from NAUG for \$27.95 plus \$3.50 s/h. Specify whether you want the AppleWorks 1.x/2.x or AppleWorks 3.0 kit of materials.

NAUG members working at schools with AppleWorks site licenses also qualify for 50% discounts on the *Hands-On AppleWorks 3 Lab Packs*. Each

Special Offers...

Lab Pack includes 10 copies of the 416-page student manual, the teacher's guide, the data disk, a package of blackline masters for quizzes and overheads, a wall chart of commands, and a pack of 25 command cards. Schools with site licenses can buy the lab pack, which usually costs \$277 (softcover) or \$331 (hardcover), for \$138.50 and \$165.50 respectively. Add 10% for shipping/handling. Place your lab pack order directly with the publisher.

[Hands-On AppleWorks Special, NAUG, Box 87453, Canton, Michigan 48187; (313) 454-1115; Fax: (313) 454-1965.]

[Computer Literacy Press, 5750H Obata Way, Box 22383, Gilroy, California 95021; (800) 225-5413; Fax: (408) 848-1483.]

Sequential Systems

NAUG members can now get special discounts on two new products that enhance the performance of ImageWriter printers connected to Apple II and/or Macintosh computers.

Sequential's MegaBUFF is a high performance network compatible print buffer that installs inside the ImageWriter II. The MegaBUFF stores up to one megabyte of data sent by an Apple II or Macintosh computer and releases the computer so you can work while the ImageWriter prints your output. (An "average" text-only page from AppleWorks GS includes about 170K of data for the ImageWriter.)

You can also use the MegaBUFF to transform your ImageWriter II into an AppleTalk network-compatible printer. In this mode, the MegaBUFF adds four "sockets" to the network. One user can spool output to one socket while the printer produces output from another computer. That makes the MegaBUFF ideal for schools and other multi-user settings needing low-cost solutions that let users share printers.

The MegaBUFF lists for \$199.95. NAUG members can buy the MegaBUFF directly from NAUG for \$129.95 plus \$3.50 s/h.

NAUG members working in school laboratories and other settings equipped with more than one ImageWriter printer should consider Sequential's

new stand-alone AppleTalk/ImageWriter printer server, the Q:Talk:iws. The Q:Talk:iws connects to an AppleTalk network and automatically routes your Apple IIGS, Workstation card-equipped Apple IIe, and/or Macintosh output to up to five different ImageWriter printers. You can configure the system to print to a specific printer or to the next available printer.

The Q:Talk:iws, which can accept up to four megabytes of standard SIMM memory, also eliminates the need for buffers, AppleTalk connectors, and AppleTalk boards in each of the ImageWriter printers.

The Q:Talk:iws lists for \$599.95 with 1-megabyte of memory. NAUG members can buy a 1-megabyte Q:Talk:iws directly from NAUG for \$399.95 plus \$10.50 s/h. NAUG accepts Visa and MasterCard. Payment must accompany school purchase orders.

[National AppleWorks Users Group, Box 87453, Canton, Michigan 48187; (313) 454-1115; Fax: (313) 454-1965.]

TotalControl

NAUG members can now get special discounts on TotalControl, Randy Brandt's powerful set of AppleWorks' data base enhancements. TotalControl adds logical and arithmetic functions, automatic formatting of your data, protection, lookups, and the ability to perform date arithmetic to AppleWorks' data base module. The program also adds relational capability to AppleWorks, lets you import data from other files, and includes a built-in pop-up calculator. A favorable review of TotalControl appears in the May 1992 issue of the *AppleWorks Forum*.

TotalControl lists for \$60. Until July 1, NAUG members can buy TotalControl directly from the developer for \$40 plus \$3 s/h (international orders, add \$2). TotalControl comes on a 3.5-inch disk; add \$2 for 5.25-inch media. JEM accepts Visa and MasterCard.

[JEM Software, 7578 Lamar Court, Arvada, Colorado 80003. Orders and fax: (303) 422-4856; follow the voice prompts to send a fax.]

New Disks in the NAUG Public Domain Library

Apple II History

In early 1991, Steve Weyhrich decided to write a short piece describing how the Apple II evolved into the Apple IIGS. As often happens, Steve's idea grew into a comprehensive project that describes the development and evolution of the Apple II family of computers.

Steve's 760K of AppleWorks word processor files on this disk are filled with interesting and useful information. Teachers will find the disk a valuable resource for student projects. Others of us will use the disk to learn more about our computers. (For example, after reading the history you will understand why you address the printer port in an Apple IIGS as "Slot 1", why typing PR#6 in BASIC reboots your computer, and why PR#3 changes your screen to 80-column mode.)

Our thanks to Steve Weyhrich for donating his comprehensive work to NAUG's Public Domain Library. And our appreciation to Howard Katz who converted Mr. Weyhrich's original text files into AppleWorks and formatted all the files.

The Apple II History comes on three 5.25-inch disks (\$12) or one 3.5-inch disk (\$6) plus \$2 s/h per order.

Apple System Disk – v. 4.01

NAUG's Public Domain Library now includes version 4.01 of Apple Computer's Apple System Disk. This disk includes new versions of ProDOS 8 (version 2.0.2), BASIC.SYSTEM (version 1.5), and FASTCOPY (version 1.0.1).

Apple's ProDOS Utilities on this disk can format disks, copy files, and perform other disk management activities. The disk also includes Apple's new ProDOS clock patch, which modifies ProDOS so that ProDOS-compatible clocks (such as the clock built into the Apple IIGS) recognize dates after 1996.

The Apple System Disk offers an inexpensive set of disk management utilities for schools and other users who cannot justify copies of FileMaster, Copy II+, or other disk utility programs for each computer. The clock patch on the disk is a "must" for those of us who plan to keep our Apple II's after 1996.

NAUG's agreement with Apple lets us distribute this disk only to NAUG members; include your NAUG membership number with your order. The license agreement does not let us upload this disk to NAUG's bulletin board, the Electronic Forum, or to our other electronic services.

DIF Converter

AppleWorks 3.0 can output data in a tab-delimited ASCII file that you can use to transfer your data to other applications and platforms. However, earlier versions of AppleWorks cannot create tab-delimited files.

DIF Converter is a BASIC program that lets owners of earlier versions of AppleWorks create tab-delimited files from their DIF output. That gives users of AppleWorks 1.x and 2.x the same level of connectivity provided by AppleWorks 3.0.

Our thanks to Robert Phillips for developing the DIF Converter and for contributing his work to the public domain.

Financial Templates Demo

The NAUG Public Domain Library now includes the Financial Templates Demo Disk which contains four AppleWorks 3.0 financial planning templates developed by long time NAUG member Steve Hartz. The templates include an enhanced version of the mortgage amortization schedule published in the September 1992 issue of the *AppleWorks Forum*, a mortgage comparison template that helps you select your best mortgage alternative, an IRA

Public Domain Update...

tracking template that tracks the rate of return for each investment in a managed IRA account, and a simple spreadsheet that compares taxable and non-taxable yields.

This demonstration disk contains non-functional copies of the templates. For the fully functional templates, you must send the author \$7 after getting the demonstration disk from NAUG.

Government '93

This disk contains AppleWorks data base files with the name, address, and telephone number of all the Senators and Representatives in the 103rd Congress. The disk also includes the name and party affiliation of all state Governors. This is the perfect disk for teachers, students, and the rest of us who want to contact our elected officials.

Our thanks to Howard Katz for compiling these files for NAUG.

Macintosh Disks

NAUG members with Macintosh computers should consider two new disks in the Public Domain Library of our sister organization, the ClarisWorks Users Group (C•WUG).

The Macintosh Hardware System Update Disk contains official bug fixes for System 7.1. This disk, developed by Apple Computer, fixes a problem with floppy disk ejection experienced by some users of Macintosh IIsi, ci, vx, vi, and Quadra 700 and 950 systems. The disk also fine-tunes the system clock and enhances high-speed modem communications on Macintosh LC, LCII, IIsi, IIvx, IIvi, Classic II, and Quadra 900 and 950 systems.

Apple suggests that only users experiencing these problems need to install this update.

Apple's 32-Bit Enabler Disk lets owners of Macintosh II, IIx, IIcx, and SE/30 computers use 32-bit addressing with System 7.1. 32-bit addressing lets these computers access up to 128 megabytes of RAM and use the virtual memory feature provided by System 7.1. (The 32-Bit Enabler lets Macintosh II owners access up to 68 megabytes of RAM. The Macintosh II needs a paged memory management unit to access the virtual memory feature provided

by this software.) You should install the 32-Bit Enabler only if you use System 7.1 on one of the above named machines.

Both of these disks come on 3.5-inch Macintosh formatted disks and cost \$6 per disk plus \$2 s/h *per order*. NAUG's license limits our distribution to NAUG members; include your NAUG membership number with your order. Our thanks to Apple Computer for supplying these disks to NAUG.

How to Get Disks

Unless otherwise noted, all disks are available in both 5.25-inch (\$4) and 3.5-inch (\$6) format, plus \$2 s/h *per order*. Order from: Public Domain Library, NAUG, Box 87453, Canton, MI 48187; (313) 454-1115; Fax: (313) 454-1965. NAUG accepts Visa and MasterCard.

All NAUG disks (except system disks provided by Apple Computer) are also available for downloading from NAUG's electronic bulletin board (the Electronic Forum), and from the NAUG areas on CompuServe, America Online, and GENie. ■

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Help with CPUs and Memory

by Nanette Luoma

Each month, the *AppleWorks Forum* lists the member-volunteers who offer technical support for AppleWorks. This month's list identifies the volunteers who can answer questions about CPUs and memory. Next month's list will identify volunteers who can answer questions about your peripherals and printers.

How to Use this List

Use this month's list to find volunteers who will answer your questions about your CPU and memory. To the left of each volunteer's name are numbers indicating the enhancements that consultant supports.

1 = Apple II+	9 = MS-DOS Computers
2 = Apple IIc; IIc Plus	10 = No Slot Clock
3 = Apple IIe	11 = RAM Disks
4 = Apple III	12 = RamFactor Cards
5 = Apple Memory Cards	13 = RamWorks Cards
6 = Checkmate Cards	14 = TransWarp Cards
7 = Laser Computers	15 = Zip Chip
8 = Macintosh Computers	16 = Zip GSX

	City	Home	Work
Alabama			
1,3,7,10,11,13,15 David A. Normand	Fairhope	205-928-2588	

Arizona			
2,3,6,12,15 Clay Evitts	Tucson	602-885-9789	602-296-5491

California			
1,3,5,7,11,13,15 James P. Davis	Hayward	510-489-7024	
2,15 Cary Hellman	Walnut Creek	510-945-1290	
3,8,10,13-15 Terence Higgins	Newark	510-745-7884	415-593-2500
3,12 Alan E. Kahn	San Anselmo	415-457-9827	
2 Lucien Lacour	Port Hueneeme	805-382-1659	
3,9,10,12,13,15,16 Will Nelken	San Rafael	415-459-0845	415-456-1798
16 Richard K. Stone	Northridge	818-360-0055	

Colorado			
3,11,13,16 Lyle Graff	Littleton	303-794-5970	303-977-4557
2,3,5,8,10,12,13,15 Geoff Hollingsworth	Morrison	303-697-9277	303-760-4345
2,3,5,7,9,11,13,15,16 Stephen Reiss	Aspen	303-923-6172	303-923-6172

Florida			
2,3,9 Henry Clay Bailey III	Jacksonville	904-744-2499	904-725-3477
5,8 Robert J. Booz	Port Richey	813-868-1802	
2,10 Thomas J. Stanius	Miami	305-378-6953	305-375-2095
1-3,5,6,10-16 Jeff Strichard	Ft. Lauderdale	305-587-9590	305-977-4991

Georgia			
2,11 Rick White	Stone Mountain	404-469-0521	404-616-3350

Idaho			
3 Donald H. Campbell	Lewiston	208-743-9639	208-743-8589

Illinois			
3,7,9,12,14 William Davis	Hinsdale	708-655-9142	708-887-1730
3,9,15 David Grayson	Oak Park	708-848-0946	708-573-2760
3,7,10,11 Charles Jonaitis	Wilmette	708-256-7871	
3,11,13,15 Howard Katz	Batavia	708-879-5818	708-246-4900

		City	Home	Work
Indiana				
2,3,11,16 Jack Countryman		Greensburg	812-663-4998	
3,7,11,13,14 Brian Henke		Noblesville	317-773-8401	317-251-1132

Iowa				
4,7,10,11 Keith King		Ft. Madison	319-372-9521	319-753-6561

Louisiana				
3,5,9,14 Charles Fryling, Jr.		Baton Rouge	504-766-3120	504-388-1473

Maryland				
3 Tony Mattern		North East	410-658-4799	410-658-5535
1-3,5,7,9,11 Michael Spurrier		Baltimore	410-298-0263	410-396-0775

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3 George Calder		Livonia	313-455-0045	
3,13 James T. Clark		Wyoming	616-243-8361	
2 Sharon A. McCreery		Kalamazoo	616-344-1201	
11 Michael McMinn		Swartz Creek	313-635-0497	313-232-6541

Minnesota				
1-3,5,8,11,14,16 James Hirsch		Coon Rapids	612-421-8393	612-422-5572

Montana				
2,3,11,13 Steve Bernbaum		Shepherd	406-373-6393	

Nevada				
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1-3,5,8-10 Paul Cuetara		N. Hampton	603-964-8343	603-964-8343

New Jersey				
3,8,14 Pete Crosta		Nutley	201-667-6369	201-677-4080
3,9,11,13,14 Gary Hansen		Highland Park	908-819-0017	

New Mexico				
3,7,11,13-15 Paul Edwards		Las Cruces	505-525-2708	

New York				
1-3,5,10,13,15 William C. Bates		Tonawanda	716-834-5428	
3,9,13,15 Bob Beer		Coram	516-928-6870	
3,16 Ira M. Garvin		Oakdale	516-563-1253	516-489-7620
2 Harold S. Miller		Ozone Park	718-641-5208	
3 Amy S. Perry		Arkport	607-295-7932	607-295-7471
2,11,15 Gary C. Walters		Hamburg	716-941-5442	

Ohio				
1,3,7,8,11 Jason Chao		Cleveland Heights	216-321-5451	215-844-3791
11,16 Tom Gwilt		Conneaut	216-593-2216	
2,11 Stephen Hartz		Crestline	419-683-4593	

Oklahoma				
3,10,11,15 M. Coleman Hull		Oklahoma City	405-722-2066	

Oregon				
3,5,7,8,14 Jim Emig		Portland	503-771-1916	503-280-5676
2,3,8,9,14,16 Richard Millus		Medford	503-772-9787	

Members Helping Members...

		City	Home	Work
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14	Claude W. Davis, Jr.	Stewartstown	717-993-6874	717-845-3571
2,3	Hal Shapiro	Eagleville	215-630-8936	
2,3,7,13,14	Marvin Tubbs	Union City	814-438-7281	814-438-3441
Rhode Island				
7	Richard A. Martone	Warwick	401-739-8698	
1-3,5,7,8,11-14	Don McCabe	Saunderstown	401-294-6256	508-636-2611
South Carolina				
9	David R. Kerwood	Charleston	803-766-7902	803-743-3130
Tennessee				
3,14	Joel Goldman	Nashville	615-352-3617	615-352-8676
Texas				
5,11,13	B.H. Hinshaw, Jr.	Arlington	817-274-2740	214-670-2119
3,5,16	Ramon F. Merlin	San Antonio	512-496-5331	
1,3,10-15	Bud Simrin	Fort Worth	817-246-0859	
Vermont				
2,3,8,11-13	Douglas C. Corey	Middlebury	802-388-6209	802-388-4021
3,13,14	John Nunnikhoven	Weston	802-824-6286	
Virginia				
3,8,13	Ellen Nesbit	Virginia Beach	804-496-8931	804-366-4545
16	Wayne Sheffield	Virginia Beach	804-340-6799	
Washington				
2,5,8,14	Kent Hayden	Tacoma	206-566-9467	206-931-2669
Wisconsin				
3	Peter W. Lee	Milwaukee	414-344-6807	414-229-6180
2,3,9,14	Lucas Mikkelsen	Glen Flora	715-322-5633	715-532-5511
3,8-10	Scott Peterson	DeKalb	815-748-3876	
Australia				
3,13,14	D.E. Bruce	Caringbah, NSW	612-527-4731	612-524-3859
11-14	Nicholas Pyers	Elsternwick	613 593-2115	
Brazil				
1-3,5,9,11-13	Paulo Chachamovich	Porto Alegre	051-226-4358	051-225-4778
Canada				
1-3,5,8,9,12,14-16	Jean Guy Mariage	Montreal	514-922-4566	514-252-2541
8,11	Trudy Young	Toronto		416-449-9400
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Japan				
3,8,9,13	Jack Thro	Osaka	81-6-338-9163	81-6-586-3926
Switzerland				
1-3,8	Charles Kubler	Volketswil	01-945-5873	

NAUG Classifieds

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with Dr. Warren Williams

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(313) 454-1115; Fax: (313) 454-1965

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Electronic Index Update

Electronic Index Update – April 1993

Enter the default values for these categories: Volume #: 8 • Issue #: 4 •
Date: Apr. 93

Letters to NAUG • 2 • How to Create Comma-Delimited Files • Kuhr, Rob • AppleWorks; data base; ASCII; MS-DOS; file conversion; file transfers; Cross-Works; TextTools

Letters to NAUG • 3 • How to Use an Epson LQ Printer • Scratchley, William Jr. • Epson; printers

Letters to NAUG • 3 • An Important Source of Information • Fahs, James • hardware; repairs; SAMS

Software Review • 4 • The Manager and Switch-It!: Major Enhancements for Your IIGs • Garvin, Ira M. • The Manager; Switch-It; Finder; Sequential Systems; Seven Hills

Software Review • 5 • The Limits to Program Switching • Garvin, Ira M. • The Manager; Switch-It; memory; Finder; Sequential Systems

My Favorite Template • 9 • A Sophisticated Business Invoice Template • Hecker, Stan • spreadsheet; templates; business; finance; invoices

Special Offers • 16 • Special Price on Express 2.0 • N/A • Express; Seven Hills

My Favorite Macro • 17 • How to Remove Files Quickly • Johnson, Keith • macros; UltraMacros; TimeOut; files; Ultra 4

My Favorite Macro • 18 • A Macro That Corrects for Hand Shifting • Johnson, Keith • macros; humor; UltraMacros; TimeOut; Ultra 4

My Favorite Macro • 19 • How to Add a Macro • Johnson, Keith • macros; UltraMacros; TimeOut; Ultra 4

UltraMacros Primer • 20 • How to Use Debug • Brandt, Randy • Debug; Ultra 4; TimeOut; UltraMacros; macros

UltraMacros Primer • 21 • The History of Debug • Brandt, Randy • Debug; Ultra 4; TimeOut; UltraMacros; macros

NAUG News • 24 • A More Attractive AppleWorks Forum • N/A • AppleWorks Forum

Special Offers • 25 • Special Offers for NAUG Members • N/A • Office Productivity Software; Apple Expo West; SoftSpoken; NAUG; Sequential Systems; JEM Software; Computer Literacy Press; AmperMacros; Apple II Guide; Connectix; Varcon; MacStronomy; Cross-Works; Hands-On AppleWorks; MegaBuff; Q:Talk:ins; TotalControl

Public Domain Update • 28 • Five New Disks in the Public Domain Library • N/A • Public Domain; Apple II History; Apple System Disk; DIF Converter; Financial Templates Demo; Government '93; Hardware System 7.1 Update; 32-Bit Enabler; Macintosh

Members Helping Members • 30 • How to Get Help with CPUs and Memory • Luoma, Nanette • Apple II+; Apple IIc; Apple IIc Plus; Apple IIe; Apple III; memory cards; Checkmate; Laser 128; Macintosh; MS-DOS; No Slot Clock; RAM Disks; RamFactor; RAM Cards; RamWorks; TransWarp; Zip Chip; ZipGSX

New Keywords: SAMS; Debug; Apple II+; Apple IIc Plus; Apple III; MS-DOS; Connectix; Varcon; MacStronomy; MegaBuff; Q:Talk:ins; Apple II History; DIF Converter; Financial Templates Demo; Government '93; Hardware System 7.1 Update; 32-Bit Enabler



NAUG

National AppleWorks Users Group
Box 87453, Canton, Michigan 48187
(313) 454-1115 Fax: (313) 454-1965
BBS: (615) 359-8238

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